



BCA Capability Statement



Gledswood Hills High School

Prepared for: NSW Department of Education
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			Ethan Davies	Mathew Marks

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1 Executive Summary

MBC Group have assessed architectural design documents prepared by djrd architects (refer appendix A) for compliance with the National Construction Code - Building Code of Australia Volume One 2022 (referred to as BCA).

The purpose of the assessment is to provide surety that the proposed high school has been assessed and is capable of complying with the BCA and that subsequent compliance with the provisions of Parts C, D and E of the BCA will not give rise to significant design amendments.

The application for Crown Certificate shall be assessed under the relevant provisions of the Environmental Planning & Assessment Act 1979 (As Amended) and the Environmental Planning & Assessment (Development Certification and Fire Safety) Regulation 2021.

2 Introduction

2.1 Purpose

This BCA capability report has been prepared by MBC Group on behalf of the NSW Department of Education (DoE) to assess the potential environmental impacts that could arise from the new Gledswood Hills High School (the Proposal) at 9 Gregory Hills Drive, Gledswood Hills (the site). The works are proposed by the DoE to meet the growth in educational demand in Gregory Hills and Gledswood Hills, and the broader South West Growth Area.

This report has been prepared to provide surety that the proposed new highschool has been assessed and is capable of complying with the BCA.

2.2 Methodology

The methodology applied in undertaking this assessment has included: -

- A desktop review of architectural plans, as listed in Appendix A
- Assessment of the architectural plans against the following relevant codes:-
 - Sections C, D, E (as applicable / relevant) of the National Construction Code Series (Volume 1) Building Code of Australia 2022 (BCA)
 - Environmental Planning and Assessment Act 1979 (EPAA)
 - Environmental Planning & Assessment (Development Certification and Fire Safety) Regulation 2021 (EPAR)
- Discussions with the design development team to gain an understanding of the development proposed.

2.3 Limitations

This statement **does not include** or imply any detailed assessment for design, compliance or upgrading for:

- the structural adequacy or design of the building;
- the inherent derived fire-resistance ratings of any proposed structural elements of the building (unless specifically referred to); and
- the design basis and/or operating capabilities (including pressure & flows) of any proposed
 - electrical
 - mechanical
 - hydraulic
 - fire protection services.

This statement does not include, or imply compliance with:

- the National Construction Code – Plumbing Code of Australia Volume 3
- the Disability Discrimination Act 1992 including the Disability ((Access to Premises – Buildings) Standards 2010 – unless specifically referred to)
- The deemed to satisfy provisions of Part D4 and F4D5 of BCA 2022
- Demolition Standards not referred to by the BCA;
- Work Health and Safety Act 2011;
- An out of cycle change to the Building Code of Australia.

- Requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Roads and Transport Authority, Local Council, ARTC, Department of Planning and the like; and

3 Description

3.1 The proposal

The proposed activity involves the construction and operation of a new high school at the site accommodating 1000 students, including:

- A series of school buildings along the northern, eastern and southern site boundaries.
- A school hall.
- An assembly area, sports field and multi sports courts.
- Car parking and a Kiss and Drop zone.
- Associated on and off-site infrastructure to support the school, including a new pedestrian crossing and relocation of the existing bus stop on Gregory Hills Drive to the site frontage.

The Review of Environmental Factors prepared by Ethos Urban provides a full description of the proposed works.

3.2 Location

The site is located at 9 Gregory Hills Drive, Gledswood Hills, within the Camden Local Government Area (LGA), approximately 60km southwest of the Sydney CBD and approximately 3.5km from Narellan Town Centre. It comprises one lot, legally described as Lot 2 in DP 1262720, that measures approximately 4.15ha in area. The site is bound by Digitaria Drive to the north and Gregory Hills Drive to the south. To the east lies two vacant lots, a childcare centre and a fast food outlet. To the west lies another childcare centre and a vacant lot (which also has approval for a childcare centre). The site has been confirmed as not bushfire prone land.

An aerial image of the site is shown at Figure 1.



Figure 1 - Site aerial



Figure 2 - Site Plan

3.3 Concept Approval

This report has considered the concept approval (DA/2017/45/1) for a mixed-use development comprising bulky goods premises, business premises, food and drink premises, indoor recreation facilities, two hotels and a cinema. It has been determined that the concept approval is not applicable to the subject of this report, and implications for assessment have not been identified.

3.4 Significance of Environmental Impacts

Based on the identification of potential issues, and an assessment of the nature and extent of the impacts of the proposed highschool, it is determined that:

- The extent and nature of potential impacts are low and will not have significant impact on the locality, community and/or the environment.
- Potential impacts can be appropriately mitigated or managed to ensure that there is minimal impact on the locality, community and/or the environment.

3.5 BCA Classification (Part A6)

The proposed highschool has been classified as:

- Class 5: being an office building or part
- Class 9b: being a school

3.6 Rise in Storeys (Clause C2D3)

The proposed highschool has been assessed to have a rise in storeys of three (3).

3.7 Effective Heights (Part A1)

The proposed highschool has been assessed to have an effective height of 7.5m, this is measured from floor level 101.600m to floor level 109.100m

The BCA now defines effective height as: -

“Effective height means the vertical distance between the floor of the lowest storey included in a determination of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units).”

3.8 Type of Construction Required (Clause C2D2 / Table C2D2)

The proposed highschool is required to be “Type A” for buildings A, B and C and “Type C” Construction for building D (Hall). Specification 5 outlines the fire resistance required by certain building elements. This has also been provided in Appendix B.

3.9 Building Data Summary

Part of Development	Use	Class	Floor Area (approx.) m ²	Population
Ground Level - Blocks A, B & C	Office, General Learning Space	5, 9b	3948m ²	Students: 500 Staff: 80
Level 2 - Blocks A, B & C	Office, General Learning Space	5, 9b	3,874m ²	As above
Level 3 - Blocks A, B & C	General Learning Space	9b	3,874m ²	As above

Part of Development	Use	Class	Floor Area (approx.) m ²	Population
Block D	Multipurpose Hall	9b	1,650m ²	Same as above

Summary of Construction and Building	
Use(s)	School, office, ancillary
Classifications(s)	5, 9b
Number of Storeys contained	3
Rise in Storeys	3
Type of Construction	A
Effective Height	7.5
Climate Zone	6
Importance Level	Structural Engineer is to determine importance level in accordance with BCA and AS1170 Part 0-2002, this must be specified in their design certificate

Summary of Construction and Building	
Use(s)	Hall
Classifications(s)	9b
Number of Storeys contained	1
Rise in Storeys	1
Type of Construction	C
Effective Height	0
Climate Zone	6
Importance Level	Structural Engineer is to determine importance level in accordance with BCA and AS1170 Part 0-2002, this must be specified in their design certificate

4 Proposed Fire Safety Schedule

The following is a draft Fire Safety Schedule for the proposed building, listing the likely measures and standards of performance required, this schedule shall be subject of further development and review as part of the Performance Solutions assessment:

Fire Safety Schedule

Section 78 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021

Premises: Gledswood Hills High School
Address: 9 Gregory Hills Drive, Gledswood Hills

The following essential fire safety measures shall be implemented in the whole of the building premises and each of the fire safety measures must satisfy the standard of performance listed in the schedule which, for the purposes of Section 78 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021, is deemed to be the current fire safety schedule for the building.

SCHEDULE – Base Building BCA 2022 Type of Construction A and C Effective height = 7.5

	Measure	Status	Existing Performance Standard
1.	Automatic fire detection and alarm system	N	BCA 2022 Clause E2D2, E2D3, E2D9 & NSW E2D16 Spec 20 Clause S20C4, S20C6, S20C7 AS 1670.1-2018,
2.	Emergency lighting	N	BCA 2022 Clause E4D2, E4D3 E4D4, AS 2293.1-2018
3.	Exit and directional signage	N	BCA 2022 Clause E4D5, NSW E4D6 & E4D8, Spec 25 AS 2293.1-2018
4.	Fire hose reel systems	N	BCA 2022 Clause E1D3, AS 2441-2005
5.	Fire hydrant systems	N	BCA 2022 Clause E1D2, AS 2419.1-2021,
6.	Fire seals (protecting openings and service penetrations in fire resisting components of the building)	N	BCA 2022 Clause C4D15, Spec 13, AS 4072.1-2005, AS 1530.4-2014, Manufacturer's specifications
7.	Mechanical air handling systems (Automatic Shutdown)	N	BCA 2022 E2 and NSW Part E2, NSW E2D16 AS/NZS 1668.1-2015, AS 1668.2-2012
8.	Occupant warning system	N	BCA 2022 Clause E2D3, Spec 20 Clause S20C7, AS 1670.1-2018
9.	Portable fire extinguishers	N	BCA 2022 Clause E1D14, AS 2444-2001

	Measure	Status	Existing Performance Standard
10.	Smoke and heat vents	N	BCA 2022 Part E2, Spec 22, S20C8, NSW E2D16 AS 2665-2001
11.	Smoke exhaust system	N	BCA Clause E2, Spec 21, AS/NZS 1668.1-2015
12.	Wall wetting sprinkler and drencher systems	N	BCA 2022 Clause C4D5, AS 2118.2-2021
13.	Add in performance solution requirement e.g. Storage of XXXX materials on storey XXXX must be less than XXXX above finished floor level	N	Performance Solution Report XXXXX, prepared by XXXX dated XXXX

Notes

* Indicate whether the measure is new (N), existing (E) or Modified (M)

5 Assessment

5.1 Relevant BCA Edition

The proposed new highschool will be subject to compliance with the relevant requirements of the BCA as in force at

- (a) the date of the invitation for tenders to carry out the Crown building work, or
- (b) in the absence of tenders, the date on which the Crown building work commences, except as provided by this section.

As such this statement is based upon the Deemed-to-Satisfy provisions of BCA 2022, which is the current BCA in force at the time of writing. An amended report reflecting the 2025 BCA provisions can be completed at request upon it's adoption.

Adoption of the 2025 BCA is anticipated to be 1 May 2025.

5.2 Compliance with the BCA

A desktop assessment was carried out against the technical provisions of the BCA and compliance matters will be addressed in the Crown Certificate documentation. It is noted that the proposed highschool must comply with the relevant requirements, and this can be achieved by complying with the Performance Requirements of the BCA:

5.2.1 A2GA Compliance with the Performance Requirements

Performance requirements are satisfied by one of the following:

1. A Performance Solution
2. A Deemed-to-Satisfy Solution
3. A combination of (1) and (2)

Upon assessment of architectural plans, MBC Group can verify that the proposed design can readily achieve compliance with the performance requirements of the BCA, the below table summarises a number of identified performance solutions.

DTS Clause	Description of DtS departure	Performance Requirement
D2D5 Exit travel distances		
D2D5	Block A	D1P4, E2P2
	- Level 1 - Up to 30 m to a POC in lieu of 20m.	
	- Level 2 - Up to 26 m to a POC in lieu of 20m.	
	Block B	
	- Ground - Up to 27 m to an exit in lieu of 20m	
	- Level 1 - Up to 29 m to a POC in lieu of 20m.	

DTS Clause	Description of DtS departure	Performance Requirement
	<ul style="list-style-type: none"> - Level 2 - Up to 30 m to a POC in lieu of 20m. <p>Block C</p> <ul style="list-style-type: none"> - Ground - Up to 34 m to an exit in lieu of 20m - Level 1 - Up to 25 m to a POC in lieu of 20m. - Level 2 - Up to 24 m to a POC in lieu of 20m. <p>A fire engineering performance solution is to be sought to address this non-compliance.</p>	
Fire hydrants		
E1D2 & AS2419.1	<p>Fire hydrant takes are required to be located a minim 10m away from any buildings in accordance with AS2419.1-2021.</p> <p>A fire engineering performance solution is to be sought to address this non-compliance.</p>	
Fire hose reels		
E1D3	<p>It is proposed to omit fire hose reels from non-classroom and office areas i.e. gym, canteen, multipurpose hall etc.</p> <p>A fire engineering performance solution is to be sought to address this non-compliance.</p>	E1P1

Any Performance Solution will be subject to consultation and approval by Fire and Rescue NSW as part of the Crown Certificate process.

5.3 Performance Solutions Non-fire or Access Related

The assessment of the design documentation has revealed that the following areas are required to be assessed against the relevant Performance Requirements of the BCA. The submission for a Crown Certificate will need to include verification from a Accredited Consultant (suitably qualified in the relevant field), where determined permissible under A2G1 of the BCA, for the following aspects:

DTS Clause	Description of DtS departure	Performance Requirement
Part F3	If DtS requirements cannot be satisfied, an F3P1 weatherproofing performance solution is to be provided.	F3P1
Part J	Part J Report to be provided by Architect or ESD Consultant. ESD Consultant or Architect to certify CC Plans achieve compliance with Part J.	Part J

6 Conclusion

This statement outlines the findings of an assessment of the referenced architectural documentation for the proposed new highschool against the Deemed-to-Satisfy provisions of the National Construction Code Series (Volume 1) Building Code of Australia 2022.

In view of this assessment we can confirm that compliance with the National Construction Code Series (Volume 1) Building Code of Australia 2022 is readily achievable.

Based on the identification of potential issues, and an assessment of the nature and extent of the impacts of the proposed highschool, it is determined that:

- The extent and nature of potential impacts are low and will not have significant impact on the locality, community and/or the environment.
- Potential impacts can be appropriately mitigated or managed to ensure that there is minimal impact on the locality, community and/or the environment.

No mitigation measures are required.

We trust that the above submission is of assistance and should you wish to discuss any aspect of this advice, please do not hesitate to contact the undersigned.

Best regards,



Ethan Davies
Senior Building Surveyor
MBC Group

7 Appendix A – Design Documentation

The following documentation was used in the assessment and preparation of this statement:

Drawing No.	Title	Date	Revision
GHHS-DJRD-00-00-DR-A-0000	COVER & DRAWING LIST	-	-
GHHS-DJRD-00-00-DR-A-0101	SITE PLAN	15/11/24	A
GHHS-DJRD-00-00-DR-A-0250	OVERALL GROUND FLOOR PLAN	15/11/24	A
GHHS-DJRD-00-00-DR-A-0251	OVERALL LEVEL 1 FLOOR PLAN	15/11/24	A
GHHS-DJRD-00-00-DR-A-0252	OVERALL LEVEL 2 FLOOR PLAN	15/11/24	A
GHHS-DJRD-00-00-DR-A-0253	OVERALL ROOF PLAN	15/11/24	A
GHHS-DJRD-00-00-DR-A-0300	OVERALL SITE WORKS PLAN	15/11/24	A
GHHS-DJRD-B00A-GF-DR-A-1010	BUILDING A - GROUND FLOOR PLAN	15/11/24	A
GHHS-DJRD-B00A-L1-DR-A-1011	BUILDING A - LEVEL 1 FLOOR PLAN	15/11/24	A
GHHS-DJRD-B00A-L2-DR-A-1012	BUILDING A - LEVEL 2 FLOOR PLAN	15/11/24	A
GHHS-DJRD-B00A-RF-DR-A-1013	BUILDING A - ROOF PLAN	15/11/24	A
GHHS-DJRD-B00B-GF-DR-A-1020	BUILDING B - GROUND FLOOR PLAN	15/11/24	A
GHHS-DJRD-B00B-L1-DR-A-1021	BUILDING B - LEVEL 1 FLOOR PLAN	15/11/24	A
GHHS-DJRD-B00B-L2-DR-A-1022	BUILDING B - LEVEL 2 FLOOR PLAN	15/11/24	A
GHHS-DJRD-B00B-RF-DR-A-1023	BUILDING B - ROOF PLAN	15/11/24	A
GHHS-DJRD-B00C-GF-DR-A-1030	BUILDING C - GROUND FLOOR PLAN	15/11/24	A
GHHS-DJRD-B00C-L1-DR-A-1031	BUILDING C - LEVEL 1 FLOOR PLAN	15/11/24	A
GHHS-DJRD-B00C-L2-DR-A-1032	BUILDING C - LEVEL 2 FLOOR PLAN	15/11/24	A
GHHS-DJRD-B00C-RF-DR-A-1033	BUILDING C - ROOF PLAN	15/11/24	A
GHHS-DJRD-B00D-GF-DR-A-1040	BUILDING D - GF PLAN - STAGE 1	15/11/24	A
GHHS-DJRD-B00D-RF-DR-A-1041	BUILDING D - ROOF PLAN - STAGE 1	15/11/24	A
GHHS-DJRD-B00B-ZZ-DR-A-4022(P01)	BUILDING B- SECTIONS - SHEET 2 - STAGE 1	15/11/24	A
GHHS-DJRD-B00C-GF-DR-A-1030(P01)	BUILDING C - GROUND FLOOR PLAN	15/11/24	A
GHHS-DJRD-B000-ZZ-DR-A-3001	SITE ELEVATIONS	15/11/24	A
GHHS-DJRD-B00A-ZZ-DR-A-3011	BUILDING A - ELEVATIONS - SHEET 1	15/11/24	A

GHHS-DJRD-B00A-ZZ-DR-A-3012	BUILDING A - ELEVATIONS - SHEET 2	15/11/24	A
GHHS-DJRD-B00A-ZZ-DR-A-3013	BUILDING A - ELEVATIONS - SHEET 3	15/11/24	A
GHHS-DJRD-B00B-ZZ-DR-A-3021	BUILDING B - ELEVATIONS - SHEET 1	15/11/24	A
GHHS-DJRD-B00B-ZZ-DR-A-3022	BUILDING B - ELEVATIONS - SHEET 2	15/11/24	A
GHHS-DJRD-B00B-ZZ-DR-A-3023	BUILDING B - ELEVATIONS - SHEET 3	15/11/24	A
GHHS-DJRD-B00C-ZZ-DR-A-3031	BUILDING C - ELEVATIONS - SHEET 1	15/11/24	A
GHHS-DJRD-B00C-ZZ-DR-A-3032	BUILDING C - ELEVATIONS - SHEET 2	15/11/24	A
GHHS-DJRD-B00C-ZZ-DR-A-3033	BUILDING C - ELEVATIONS - SHEET 3	15/11/24	A
GHHS-DJRD-B00D-ZZ-DR-A-3041	BUILDING D - ELEVATIONS - SHEET 1 - STAGE 1	15/11/24	A
GHHS-DJRD-B00D-ZZ-DR-A-3042	BUILDING D - ELEVATIONS - SHEET 2 - STAGE 1	15/11/24	A
GHHS-DJRD-B000-ZZ-DR-A-4001	SITE SECTIONS	15/11/24	A
GHHS-DJRD-B00A-ZZ-DR-A-4011	BUILDING A - SECTIONS - SHEET 1	15/11/24	A
GHHS-DJRD-B00A-ZZ-DR-A-4012	BUILDING A - SECTIONS - SHEET 2	15/11/24	A
GHHS-DJRD-B00B-ZZ-DR-A-4021	BUILDING B - SECTIONS - SHEET 1	15/11/24	A
GHHS-DJRD-B00B-ZZ-DR-A-4022	BUILDING B - SECTIONS - SHEET 2	15/11/24	A
GHHS-DJRD-B00C-ZZ-DR-A-4031	BUILDING C - SECTIONS - SHEET 1	15/11/24	A
GHHS-DJRD-B00C-ZZ-DR-A-4032	BUILDING C - SECTIONS - SHEET 2	15/11/24	A
GHHS-DJRD-B00D-ZZ-DR-A-4041	BUILDING D - SECTIONS - SHEET 1 - STAGE 1	15/11/24	A
GHHS-DJRD-B00D-ZZ-DR-A-4042	BUILDING D - SECTIONS - SHEET 2 - STAGE 1	15/11/24	A



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